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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/617,272	07/17/2000	KYOJI KATO	106774	7448

25944 7590 09/10/2002

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EXAMINER

MULLINS, BURTON S

ART UNIT PAPER NUMBER

2834

DATE MAILED: 09/10/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/617,272

Applicant(s)

KATO, KYOJI

Examiner

Burton S. Mullins

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 July 2002.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 4 and 6-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 4 and 6-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
2. Claims 4 and 6-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over McAllister et al. (US 5,397,971) in view of Suzuki et al. (US 5,793,135). McAllister substantially teaches applicant's invention of a spindle motor for driving a magnetic disk including: a rotor or hub 19 (Fig.4) having a downwardly depending flange at an outer periphery thereof (not numbered, see Fig.4); the hub 19 journaled on a base (stator) 18 by means of bearings 18d; a ring magnet 19c on an inner peripheral surface of the downwardly depending flange (see Fig.4); the hub 19 having an inner shoulder on a surface thereof defined by cylindrical upper end 19b (c.4, lines 62-63); stator core 18e on the base opposed to the magnet 19c and including coils 18g (Fig.5); a standard magnetic disk 2a with a central aperture (not numbered) to be fitted around the inner shoulder 19b of the hub 19 (Fig.4); wherein the downwardly depending flange of the hub has an outer diameter larger than an inner diameter of the central aperture of the standardized magnetic disk (see Fig.4); an inner diameter of the magnet 19c and an outer diameter of the stator 18e are larger than the outer diameter of the inner shoulder 19b (see Fig.4); the hub 19 including an outer shoulder (not numbered; see Fig.4) of stepped shape; the outer diameter of the outer shoulder larger than the outer diameter of the inner shoulder 19b and smaller than the outer diameter of the downwardly depending flange to form a clearance (not numbered; see Fig.4) between the downwardly depending flange, which surrounds the magnet 19c, and the magnetic disk 2a. McAllister differs in that

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the bearings are not hydrodynamic bearings; neither does the base include a boss formed with the cylindrical wall and base “as a single piece member.”

Suzuki et al. (US 5,793,135) teaches a dynamic fluid sleeve bearing for a disk drive motor comprising a boss (support shaft) portion 25 with “cylindrical wall portion” (housing) 22 and base member 20 (Fig.1). The rotor shaft 28 fits onto the boss 25. Two journal regions 29 and 30 formed therebetween comprise a hydrodynamic bearing that includes spiral grooves formed on the support shaft to reduce friction (c.3, lines 38-43). The bearing, including the boss and wall portions, form a hydrodynamic bearing possessing the same advantages of ball bearings while reducing production costs (c.2, lines 1-7) as well as improving steadiness of bearing action (c.4, lines 31-40).

It would have been obvious to one of ordinary skill to modify the bearings of McAllister and provide a fluid sleeve bearing and boss per Suzuki because this would have been desirable to reduce production costs and improving bearing steadiness.

Regarding the limitation of the boss, cylindrical wall portion and base “formed as a single-piece member,” besides the fact that Suzuki teaches a multiple-piece boss/wall/base structure assembled or “formed” into a unitary, i.e., “single-piece,” member, and thus fulfills the limitation, the examiner notes that formation of Suzuki’s multiple piece boss/wall/base as a one-piece member would have involved ordinary skill since it has been held that use of a one piece construction instead of multiple piece structure involves ordinary skill. In re Larson, 144 USPQ 347 (CCPA 1965). See also In re Fridolph 135 USPQ 319 (CCPA 1962).

Response to Arguments

3. Applicant's arguments filed July 18, 2002 and discussed in the interview of August 8, 2002 have been fully considered but they are not persuasive. In particular, applicant argues that the cylindrical wall portion and base member are not formed as a single-piece member in McAllister and Suzuki. The examiner concedes this, but notes, however, that forming Suzuki's multiple piece structure, i.e., boss (support shaft) portion 25 with "cylindrical wall portion" (housing) 22 and base member 20 (Fig.1) into a "single-piece member" would have involved ordinary skill since it has been held that use of a one piece construction instead of multiple-piece structure involves ordinary skill. In re Larson, 144 USPQ 347 (CCPA 1965). See also In re Fridolph 135 USPQ 319 (CCPA 1962).

Conclusion

4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

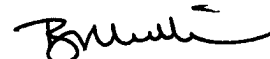
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Burton S. Mullins whose telephone number is 305-7063. The examiner can normally be reached on Monday-Friday, 9 am to 5 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor Ramirez can be reached on 308-1371. The fax phone numbers for the organization where this application or proceeding is assigned are 305-1341 for regular communications and 305-1341 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 308-0956.


Burton S. Mullins
Primary Examiner
Art Unit 2834

bsm
September 9, 2002